

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

**(19) World Intellectual Property Organization
International Bureau**



**(43) International Publication Date
24 February 2005 (24.02.2005)**

PCT

(10) International Publication Number
WO 2005/017382 A3

(51) International Patent Classification⁷: F16D 27/08,
47/00

(US). SOMMER, Gordon [US/US]; 831 Deer Court, Plymouth, Michigan 48170 (US). **OSTAPOWICZ, Adam** [US/US]; 33229 Barrington, Westland, Michigan 48186 (US).

(21) International Application Number:
PCT/US2004/024839

(74) Agent: **OLSON, Stephen; Harness, Dickey & Pierce, P.L.C.**, P.O. Box 828, Bloomfield Hills, MI 48303 (US).

(22) International Filing Date: 3 August 2004 (03.08.2004)

(4) Agent: OGDON, Stephen, Harness, Dickey & Pierce, P.L.C., P.O. Box 828, Bloomfield Hills, MI 48303 (US).

(25) Filing Language: English

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE AG AL AM

(26) Publication Language: English

kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,

(30) Priority Data: 60/493,594 8 August 2003 (08.08.2003) US

CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,

(71) **Applicant (for all designated States except US): AUTO-MOTIVE POWER SYSTEMS, LLC [US/US]; 3199 Lapeer Road, Auburn Hills, MI 48326 (US).**

KG, KR, KK, KR, EC, LR, ER, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM.

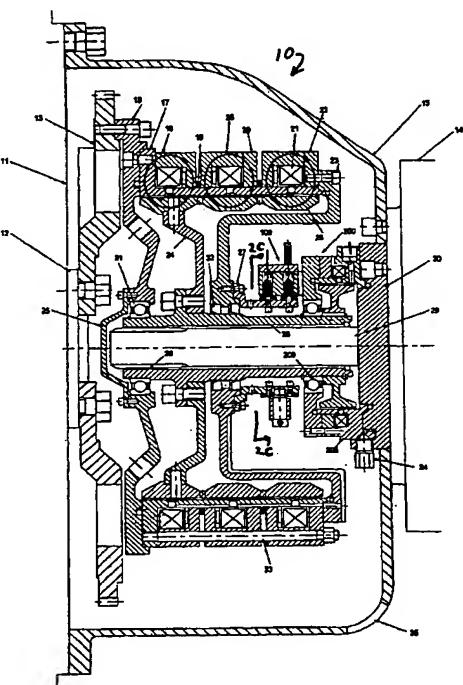
(72) Inventors; and
(75) Inventors/Applicants (*for US only*): **MOSER, George**
[US/US]; 1450 Stillman Road, Mason, Michigan 48854

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: POWERTRAIN CLUTCH

(57) Abstract: A powertrain clutch for transferring power from an output shaft of an engine to an input shaft of a manual transmission includes a housing and an electrically controlled clutch between the input shaft and the output shaft for selectively coupling and uncoupling the output shaft and the input shaft. The clutching arrangement further includes a clutch disposed between the input shaft and the output shaft for synchronizing a speed of the input shaft with a speed of the output shaft.





GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(88) Date of publication of the international search report:
15 December 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

— with *international search report*